NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

CLEARING AND SNAGGING

(ft.)
CODE 326

DEFINITION

Removing snags, drifts, or other obstructions from a channel.

PURPOSE

Reduce significant human and/or natural environmental risks by removing materials from a channel area in order to:

Restore flow capacity;

Restore natural habitat;

Restore landscape resources;

Prevent bank erosion by eddies;

Reduce the formation of bars; and/or

Minimize blockages by ice and/or debris;

CONDITIONS WHERE PRACTICE APPLIES

Any channel or drainageway where the removal of trees, brush, debris, and other obstructions is needed to accomplish the purpose.

CRITERIA

This practice must not be used where significant channel erosion will occur, major impairment to the landscape resource quality is likely, or significant impairment to fish and wildlife habitat will occur except this practice may be used where effective restoration actions are included with this practice.

Disturbance of wetlands, riparian areas, and natural habitat must be minimized where possible.

Laws and regulations. This practice must conform to all federal, state, and local laws and regulations. Laws and regulations of particular concern include those involving environmental protection, wetlands, Waters of the US, land use, pollution control, property easements, burning restrictions, preservation of cultural resources, and endangered species.

Capacity. Where this practice will significantly change previously existing flow conditions, bank full and flood level capacity of the channel, both before and after improvement, shall be determined by use of Manning's Formula, using applicable values of retardance factor "n," for each condition. The value of "n" used to determine channel capacity after improvement shall reflect natural changes and maintenance expected in future years. This analysis shall include a study of the stream geomorphology.

Cleared material shall be removed from the floodplain or deposited in specified locations that will not significantly reduce flood flow capacity.

Location. The area to be cleared and snagged may include the perimeter of the channel, the flow area of the floodway, or both. Adjacent trees or other objects that may fall into the channel may also be included as appropriate. Clearing and snagging for the listed purposes may include nearby areas.

Channel stability. Clearing and snagging must not impair channel stability. Criteria for determining channel stability shall comply with the standard for Open Channels (582). The effect of removing obstructions on upstream and downstream reaches shall be analyzed.

Apply the standard for Streambank and Shoreline Protection (580) where clearing and snagging will result in streambank erosion.

Vegetation. All areas denuded and/or damaged by this practice shall be restored by planting native vegetation where practical. For seeding and mulching requirements, see Natural Resources Conservation Service standards Critical Area Planting (342), and Mulching (484).

CONSIDERATIONS

In water losing streams, faster water removal may reduce groundwater recharge.

During clearing and snagging, there may be increased water turbidity due to an increased

sediment load. Water quality may be further degraded by chemical substances (nitrogen, phosphorous, etc.) attached to the sediment particles.

During construction, a heavy organic load may be produced resulting in decreased dissolved oxygen.

Increased surface water temperatures may occur at low flow from removal of canopy shade.

Removal of objects from streams may reduce the number of pools and rifles and thereby adversely affect fish habitat.

Where appropriate, design the practice to improve fish and wildlife habitat and landscape aesthetics. Special attention should be given to protecting key shade, landscape, food, and den trees, and to stabilization of disturbed areas.

Consider removal and disposal options to reduce negative impacts of this practice.

PLANS AND SPECIFICATIONS

Plans and specifications for clearing and snagging shall meet this standard and shall describe the requirements for achieving its purpose.

OPERATION AND MAINTENANCE

A plan of operation and maintenance shall be prepared for use by the owners or others responsible for the system to insure that each component functions properly. Items to consider including are:

Where applicable, control grazing during vegetative establishment and during wet or very dry conditions.

Repair damage to vegetation and fertilize as needed to maintain vigorous vegetative growth.